

The risk of recurrent preterm birth after spontaneous preterm birth between 16-28 weeks

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Objective

Previous spontaneous preterm birth (PTB) is an important risk factor for recurrent PTB, yet general consensus on the definition of the lower limit of PTB is lacking. This lack of definition complicates the identification of patients at risk of recurrent PTB, mainly at the lower limit of gestational age of prior birth. In this study we aim to assess the risk of recurrent preterm birth following spontaneous extreme preterm birth between 16⁺⁰ and 27⁺⁶ weeks and will assess the association between the interpregnancy interval and the recurrence risk.

Methods

A nationwide retrospective cohort study was conducted with data from the Perinatal Registry of the Netherlands. We included nulliparous women with a singleton pregnancy that ended in spontaneous preterm birth between 16⁺⁰ and 27⁺⁶ weeks of gestation between 2010-2014 and had a subsequent pregnancy in the 5 years following (2010-2019). The primary outcome of this study was recurrent preterm birth < 37 weeks. Secondary outcomes included recurrent PTB < 32 weeks and < 24 weeks.

Results

In total, 1011 women with linked pregnancies were included. The risk of preterm birth < 37 weeks with prior spontaneous birth between 16-20, 20-24, and 24-28 weeks was respectively 19.0%, 29.5% and 27.6%. The risk of subsequent preterm birth < 24 weeks was 5.7%, 7.2% and 4.3% and the risk of subsequent preterm birth < 32 weeks was 11.7%, 15.9% and 10.8%, respectively. A short interpregnancy interval of 0-3 months was associated with significantly increased odds for preterm birth < 32 weeks (OR 2.28 95% CI 2.42-3.71) and preterm birth < 37 weeks (OR 1.75 95% CI 1.95-2.57).

Conclusion

Patients with previous spontaneous preterm birth from 16 weeks GA onwards are at high risk for recurrent preterm birth and should be regarded as such in the consideration of preventive measures to prevent recurrent adverse pregnancy outcomes.